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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/021,259	12/19/2001	Hiroyuki Hasegawa	P 284101 OSP-11726	5754
909	7590	07/14/2004	EXAMINER	
PILLSBURY WINTHROP, LLP P.O. BOX 10500 MCLEAN, VA 22102			KILDAY, LISA A	
			ART UNIT	PAPER NUMBER
			2829	

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)	
	10/021,259	HASEGAWA ET AL.	
	Examiner	Art Unit	
	Lisa Kilday	2829	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on election on 4/2/4.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2 and 4-7 is/are allowed.
- 6) ☒ Claim(s) 3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/651255.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>12/1, 2/2, 2/3, 9/3</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 3 is rejected under 35 U.S.C. 102(b) as being anticipated by Garnache (3,603,284). In re claim 3, Garnache discloses a purging method of a CVD apparatus that supplies semiconductor material gas (32) to a reaction chamber (18) in which a wafer (30) is placed to form a semiconductor film on said wafer; wherein, prior to semiconductor film formation after placing the wafer in the reaction chamber (col. 4, lines 37-41 where Garnache discloses loading the wafers and allowing a nominal flow of inert gas to enter the chamber), the pumping of a vacuum inside the reaction chamber (col. 4, lines 43-46 where Garnache discloses purging the chamber for about one minute by an inert gas) and the introduction of inert gas are repeated a plurality of times (col. 4, line 66 – col. 5, line 5 where Garnache discloses the addition of reactive gases; col. 5, line 14-22 where Garnache discloses purging the reactive gas with Argon for about two minutes; col. 5, lines 42-51 where Garnache discloses purging the chamber both before and after deposition).

Allowable Subject Matter

Claim 2 allowed.

The following is an examiner's statement of reasons for allowance: Garnache (3,603,284) teaches a purging method of a vapor deposition apparatus that supplies

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semiconductor material gas to a reaction chamber (18) in which a wafer is placed to form a semiconductor film on said wafer; wherein, a gas, comprising a gas such as hydrogen or helium (col. 4, lines 66-76) having a high coefficient of thermal conductivity *followed* by an inert gas that is used as the purge gas (col. 4, lines 44-51). Garnache teaches away from using a *mixture* of a gas such as hydrogen or helium having a high coefficient of thermal conductivity *and* inert gas as the purge gas (co. 5, lines 42-51) during a heated flow purging treatment because flowing an inert gas such as argon is expensive. Chang et al. (US 2004/0105934) teaches a purging method of CVD using a *mixture* of a gas such as hydrogen or helium having a high coefficient of thermal conductivity *and* inert gas as the purge gas (§44, 57). However, Chang et al. fails to qualify as prior art.

Claims 4-7 allowed.

The following is an examiner's statement of reasons for allowance: Manocha et al. (5,328,872) teaches a method of preventing moisture in the reaction chamber during a corrosive gas treatment in said reaction chamber (col. 2, lines 15-21). Hayashi (US 2003/0175414) teaches a method for judging the maintenance times of a semiconductor production apparatuses that perform corrosive gas treatment in a reaction chamber by measuring the moisture concentration in the reaction chamber with a moisture meter (ref. 338; ¶ 278). However, Hayashi does not qualify as prior art. Prior art does not teach or suggest measuring the moisture concentration in the reaction chamber with a moisture meter connected to said reaction chamber when performing a corrosive gas

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treatment in order to determine maintenance times according to changes in said moisture concentration when said treatment is performed repeatedly.


Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry of a general nature or relating to the status of this application should be directed to the Group Receptionist whose telephone number is (703) 308-0957. See MPEP 203.08.

Any inquiry concerning this communication from the examiner should be directed to Lisa Kilday whose telephone number is (571) 272-1962. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamand Cuneo, can be reached on (571) 272-1957. The fax number for the group is (703) 872-9306. MPEP 502.01 contains instructions regarding procedures used in submitting responses by facsimile transmission.

Lisa Kilday

LAK 

7/7/04

LISA KILDAY
PATENT EXAMINER
AU 2829